INDICATIONS FOR THE MAJOR OBSTETRICAL OPERATIONS.*

BY FRANKLIN S. NEWELL, M.D., BOSTON.
Assistant Professor of Obstetrics and Gynecology at Harvard University.

THE greatest advance in obstetrics in the last few years has been in the realization that obstetrics is properly a special branch of surgery, and that the application of modern surgical methods to the solving of obstetric problems has resulted in a marked change in the attitude of the obstetrician toward his patients. Before the development of asepsis placed abdominal surgery on a firm basis, the problem which the obstetrician had to solve was whether in a given case any method could be devised by which the individual patient could be delivered *per vaginam*, irrespective of the damage to her soft parts or to the child. This question was often a difficult one to answer since the conditions present in the individual case were often such as to render the ordinary obstetric operations of doubtful outcome, and the results were, therefore, often unsatisfactory. The lives of many women and the health of many more were sacrificed in the attempt to solve the problem with the means at our command, and the fetal life received comparatively little attention, and deservedly so, as compared with the maternal life. The demonstration of the safety of modern surgery and its application to obstetrics has solved the problem for us, and we can say today that practically every healthy woman can be safely delivered, with due regard to her after health and the well-being of her child, provided the conditions which call for a departure from the routine practice are discovered either before labor or early in labor, so that she can be placed under proper conditions to receive the care she needs. The question which we now have to answer is not, whether a given patient can be delivered by any method, but by what method can delivery be most safely accomplished in the given case? This change in our point of view has brought about a great change in the methods of conducting an obstetric practice and one which will grow more marked as time goes on. Under the old practice our choice of operations was limited and nature was considered supreme, each patient being allowed to go into labor irrespective of the conditions present, and difficulties were met when they arose as efficiently as possible under the circumstances, the patient being studied little or not at all before labor began. Under modern conditions each patient is regarded as presenting a problem to be studied, and it is recognized that the riddle must be solved before labor begins if the best results are to be obtained. In other words prophylaxis is assuming a greater importance in obstetric work than ever before. Every patient must now be studied from a new standpoint and the question to be answered today is this: What method of delivery offers the least danger to life and health for the mother combined with the greatest safety for the child?

This change in our viewpoint has been brought about by the introduction into obstetric work of the so-called major operations, by which we mean abdominal Cesarean section, followed or not by removal of the uterus according to the indications present, and enlargement of the pelvic canal by pubiotomy, followed by one of the ordinary obstetric operations; or, in other words, the performance of a cutting operation for delivery of the child instead of dragging it through the pelvis by brute force.

CESAREAN SECTION.

Before discussing the indications for an abdominal delivery it seems best to consider carefully the conditions which render abdominal section a safe or unsafe procedure, since the presence of certain conditions is recognized as converting what should be a safe operation into one too dangerous to be advised, and as the primary object of modern obstetrics is to preserve the fetal life without unduly jeopardizing the life or health of the mother, all conditions which definitely increase the danger to the mother should be considered as relative contra-indications to Cesarean section.

Under modern conditions an abdominal section on an uninfected patient is so safe a procedure that in general surgery an exploratory operation may be properly recommended for diagnostic purposes only, but any failure in technic transforms what should be a safe procedure into one of the greatest danger. For this reason Cesarean section is never to be advised when any other operation is possible unless the surroundings are such as to allow of proper asepsis at the time of operation. If the slightest suspicion of uterine infection is present Cesarean section is absolutely contra-indicated unless no other means of delivery is possible, since the opening of a septic uterus into the peritoneal cavity, particularly if followed by suture and replacement, is almost sure to be followed by the development of a septic peritonitis and by the death of the patient. Therefore, the performance of a Cesarean section on a patient who has developed a temperature during labor, or in whom a questionable uterine discharge has developed, should never be considered when any other method of delivery is possible, since, although these symptoms do not necessarily denote an infection of the uterus, they are so strongly suggestive of it as to absolutely contra-indicate an elective abdominal delivery. There are, however, many border-line cases in which uterine infection cannot be definitely demonstrated, in which the question of operation will inevitably arise, and these cases require the most careful judgment. There is no

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question but that each vaginal examination made shortly before or during labor predisposes to uterine infection and, therefore, a patient who has been subjected to repeated vaginal examinations during labor, even under the most favorable conditions must be looked upon as a relatively unfavorable surgical risk, and an abdominal delivery should be avoided, if possible. It naturally follows that the less perfect the aseptic precautions at examination the greater will be the risk of infection with a corresponding increase in the risk of the abdominal delivery.

Experience has also shown that the prognosis of Cesarean section is altered very markedly for the worse if any attempts at operative delivery *per vias naturales* have preceded the section, although the aseptic technic of the operator may have been above reproach. For this reason Cesarean section should never be considered as a legitimate operation after the failure of a serious attempt at delivery *per vaginam* except in the rare case when the extraction of even a perforated child is considered impossible.

The statistics of the Cesarean operation seem to show furthermore that the toxemia produced by the muscular exertion of labor has a marked influence on both the mortality and morbidity of abdominal delivery, as distinguished from true infection, and it seems certain that the effects of uncomplicated labor must be considered as affording a relative contra-indication to Cesarean section. Primary Cesarean section, *i.e.* operations at the time of election, before labor begins or in the early hours of a slight labor, is attended with practically no maternal or fetal mortality or morbidity. Each hour of active labor apparently adds to the risk of operation, although in the first twelve hours of labor the risk to the individual patient will be a comparatively slight one unless the labor is unusually severe. After labor has become active the risk increases steadily until the point is reached sooner or later at which the risk of abdominal delivery is too great for the operation to be advised, except as the only possible means of effecting delivery, although many cases will undoubtedly recover if operated on at even a late period of labor and when apparently exhausted. This increase in the risk of operation is so definite that a secondary or late Cesarean operation should never be advised unless the patient and her husband have a clear understanding of the risks involved and have deliberately chosen to assume the risk for the sake of having a living child. If the rhythm of the uterine contractions is unchanged, if the uterus relaxes normally between contractions, if the membranes are unruptured and no attempts at pelvic extraction have been made, the results of the late operation will be better than if the converse of these conditions exists, but the late Cesarean must be classified as a dangerous surgical procedure and should only be undertaken when no other method of delivery seems possible, unless the patient understands the risks involved and is willing to assume them.

The primary object of an abdominal delivery is in most cases to preserve the life of the child, but the mother should never be subjected to an avoidable dangerous operation in order to save a child, whose life must be regarded as compromised by the strain of a long, hard labor, without a full understanding of the risks involved.

Patients who are suffering from the acute exanthemata or other acute infectious diseases should be regarded as infected cases. An abdominal delivery should never be considered in cases of this nature, except when the mother's life is despaired of and the child is alive and in good condition, provided any other method of delivery can be undertaken with a hope of conserving the chances of the mother, even though it may involve the sacrifice of the child, since under these conditions the development of a septic peritonitis is extremely likely.

Acute and chronic nephritis should also be regarded as relative contra-indications to the elective Cesarean section as the patient will seldom be in a condition to withstand even a mild peritoneal infection on account of her lowered resistance, and it is probable that a certain degree of peritoneal infection follows almost every laparotomy.

For an abdominal delivery to be justifiable the patient must be in such surroundings that it is possible to provide aseptic conditions for the performance of the operation and proper care for the patient after operation.

THE INDICATIONS FOR THE CESAREAN OPERATION.

In the early days when Cesarean section was seeking recognition as a legitimate surgical procedure it was natural that its advocates should be extremely cautious in recommending its performance, and as we look through the early literature we find that the indications for which the operation was advised were limited to those cases in which the pelvic delivery of a living child was thought to be impossible, whether on account of contraction of the pelvis, the size of the child, or because of obstruction of the pelvic canal by a new growth to a degree that the passage of the child through the pelvis was an impossibility. For this reason we find that the absolute pelvic indication for the Cesarean section was placed at a point at which the delivery of a full term child, even after a destructive operation, was impossible. Contraction of the true conjugate to 5 cm. or below was originally set as the absolute indication for the operation. The relative indication was placed at 7½ cm., it being usually possible to extract a child after a destructive operation through a pelvis the true conjugate of which measures more than 5 cm., although it is impossible to extract an unperforated child (at term) through a pelvis under 7½ cm. The good results which attended the Cesarean operation under proper conditions have led to a marked extension of the pelvic

indication. At the present time 7½ cm. has been agreed upon as the absolute indication for Cesarean section, it being impossible for a spontaneous or an operative pelvic delivery to be accomplished through a pelvis of this size or smaller if the child is of average size. The relative indication has been likewise broadened to 8½ cm. in flat pelves and 9 cm. in generally contracted pelves, since Cesarean section at the time of election has been demonstrated to be less dangerous for both mother and child than an operative pelvic delivery in pelves of this size. It is fair to say, however, that at the present time we do not consider the degree of pelvic contraction as the most important factor to be considered in deciding on a Cesarean section, and we recognize that the size of the fetal head as compared with the pelvic canal is of greater importance in the majority of cases than the size of the pelvis alone. There is no doubt but that if the majority of patients who present a relative indication for Cesarean section are allowed to go into labor they can be delivered of a living child after a pubiotomy in case other methods of delivery fail, and the difference of opinion that exists among different authorities as to the method of conducting cases which are close to the upper limit of the relative indication depends on the personal equation of the individual obstetrician. One operator will say that in his opinion all primiparæ in whom the outcome of labor is only slightly dubious, should be submitted to the test of labor, the final delivery to be accomplished in accordance with the results of this test. Other operators believe that with Cesarean section at the time of election demonstrated to be a safe operation, all cases in which a real doubt as to the outcome of labor exists should be submitted to a primary Cesarean section as the safest method of procedure for both mother and child. The reason for this difference of opinion seems to be that the operators who prefer to treat the doubtful cases by the old established methods of obstetrics and see what the outcome of labor will be before deciding on the treatment, believe that they are pursuing a conservative policy, since a considerable proportion of the doubtful cases will undoubtedly be delivered either spontaneously or by pelvic operation of moderate difficulty, although a considerable number of the babies will be lost, and a greater number of mothers seriously injured by this policy. It seems fair, however, to ask under the present conditions what is conservatism? Is a man a conservative who knowingly subjects both mother and child to a serious risk because in the days before Cesarean section was demonstrated to be a safe operation the pelvic operations were the only ones which could fairly be advised in doubtful cases, be the results what they might; or should a man be classed as a conservative who says frankly, after exhausting every means at his command to arrive at a conclusion, that here is a patient in whose case the outcome of the older methods is doubtful, but that a primary Cesarean section performed before labor begins practically guarantees the life and health of both mother and child at a minimum of risk? It seems to me that in this connection conservatism is a poor word, since to me conservatism means the conservation of the interests of both patients at the least possible risk for either mother or child, whereas in the ordinary acceptation of the term conservatism is taken to mean following the traditions of obstetrics that were established in the days when abdominal surgery was considered almost necessarily fatal.

I believe that all patients in whom a serious doubt exists as to the probability of a spontaneous or easy operative delivery are best treated by primary Cesarean section, and that the test of labor, except in cases where the patient chooses to undergo this test with a full understanding of the dangers which it entails, should be obsolete. We cannot, however, lay down a definite rule which will cover all cases. In cases of doubt the patient should be anesthetized during the last month of pregnancy and the attempt made to engage the fetal head in the pelvic brim. If this is possible and no other reason for abdominal delivery exists the patient should be allowed to go into labor. If, however, it is impossible to engage the head in the brim, and particularly if the head definitely overlaps the symphisis pubis, Cesarean section should be unhesitatingly chosen as the safest means of delivery.

We recognize at the present time that there are certain other factors which must be considered in the given case. If the comparison between the maternal pelvis and the fetal head shows only a slight discrepancy, we know that the majority of women will succeed in molding the fetal head to a degree that it will pass through the pelvic brim, if the uterine contractions are of normal force, but we must consider first whether in the given case this molding is liable to occur, and second whether the maternal powers are sufficient to accomplish this without undue strain. For proper molding of the head to occur two factors are necessary; first, powerful uterine contractions to shape the head, and second, a head which is not unduly ossified. If the patient is well nourished and in good muscular condition it is fair to assume that she will have normal uterine contractions which will exert sufficient force to produce proper molding of the head. If, however, she is feeble and flabby muscularly, it is at least possible that the uterine contractions will be too weak to accomplish the degree of adapting necessary for the passage of the head through the pelvis; and in cases of this sort there is no question but that a primary Cesarean section, though perhaps unnecessary in certain cases, offers less risk for both mother and child than the test of labor and a difficult pelvic operation afterwards. We cannot estimate the ossification of the fetal head until after labor has begun, and this must al-

ways remain an uncertain factor in our choice of operation, unless we decide to apply the test of labor in all doubtful cases.

Contraction of the pelvic outlet, combined or not with a faulty inclination of the pelvis, probably causes more trouble in our American-born women than contraction of the pelvic brim, and the pelvic outlet should always be carefully measured during pregnancy. If the transverse diameter of the outlet between the ischial tuberosities measures more than 8½ cm. it is fair to assume that the pelvic outlet will cause no obstruction to the delivery of an average sized child. If, however, the transverse diameter of the pelvic outlet is less than 8½ cm. the passage of the outlet is likely to be attended with considerable difficulty; marked laceration of the soft parts is almost inevitable, and it is also possible that serious injury to the child may occur. In these cases the posterior sagittal diameter of the pelvic outlet should also be measured, *i.e.* from a line joining the posterior margins of the ischial tuberosities to the tip of the coccyx, and if this diameter measures not more than 8½ cm. a difficult delivery with serious injury to the soft parts is almost inevitable, but if the posterior sagittal diameter is increased to more than 8½ cm. a normal child can probably be delivered through the pelvis without serious damage. Patients who present irregular contractions of the pelvis, due to hip disease or some spinal malformation must be considered individually for no rules can be laid down to cover these cases, and all that can be said is that if, after a careful palpation of the pelvis under ether, definite doubt exists as to the ability of the head to pass the pelvis, a primary abdominal delivery is advisable.

Another definite indication for the performance of Cesarean section is overdevelopment of the child, and this is where many operators of today err in their choice of operation. It is not at all uncommon to hear an obstetrician say, in defending his choice of treatment in a given case, resulting in the loss of the baby, that the pelvic measurements were normal, and that therefore he did not consider the possibility of serious trouble, but his position is not a defensible one since it is not the size of the pelvis alone that counts, but the comparison between the size of the head and the size of the pelvis, as it is equally difficult for an over large child to pass through a normal passage as for a normal child to pass through a contracted passage, and the comparison between the child and the pelvis must be carefully made in each individual case before the method of delivery is selected. So much for the pelvic indications, which are usually considered as the real indications for Cesarean section. There are, however, certain other conditions in which an abdominal delivery, though perhaps not definitely indicated, will give better results than the ordinary methods of delivery.

Patients who are in poor physical and nervous condition, who have not reacted well to the strains which have been put upon them in their ordinary life, and who, instead of improving during their pregnancy, come to labor in poor shape, should be regarded as doubtful obstetric risks. In a patient of this sort the physical strain of a prolonged labor, or the nervous effect produced by pain alone, may be sufficient to produce a prolonged period of invalidism following delivery by the ordinary methods. On the other hand, patients of this type will usually undergo an operative delivery better than they will the strain of a prolonged labor, and it is fair to offer such patients the choice of an abdominal delivery, although we may have no real fear as to the outcome of labor as regards the the life of either mother or child, simply on the basis that the patient is in no condition to undergo any severe strain when that strain can be avoided by a safe surgical procedure.

Any patient to whom the life of the child is of unusual importance may fairly be advised to have an abdominal delivery at the time of election. Elderly primiparæ who may never have another child occupy the first place in this group. When no pelvic indications are present we recognize that an abdominal delivery is unnecessary in most instances, but the life of the child is of such great importance in these cases, and the danger of serious laceration of the maternal soft parts is so great, that Cesarean section is, in my opinion, the conservative course, except when careful examination shows a distinctly small child and little or no rigidity, of the maternal soft parts. Primiparæ who have been married for several years without becoming pregnant and women who, having had repeated miscarriages have at last been brought through to term by the use of unusual precautions, may be fairly considered as belonging in this group. There is no question but that Cesarean section offers the safest method of delivery for the child, and it is important in women of this class, who may never have another child, that no avoidable risks for the child should be taken, and unless the mother declines a Cesarean operation abdominal delivery is unquestionably the safest method to employ.

Patients in whom the soft parts are unusually rigid or who present more or less atresia of the vagina, whether as the result of scar tissue from previous deliveries or from operations, will be better off for an abdominal delivery than if they are seriously lacerated as a result of pelvic delivery, and in the same class may be placed patients who have been seriously lacerated at their previous deliveries and on whom operations for repair have been performed with satisfactory results, since in these cases it is very probable that a serious laceration will attend a pelvic delivery and that the patient will probably have to be subjected to a secondary operation for repair later. It is perhaps not fair to consider this as a definite indication for Cesarean section, but it is always fair to offer the patient

the chance of being delivered by a safe method which will not entail the probability of a secondary operation afterwards.

Multiparæ who have lost one or more children in previous labors, particularly if they have been under the charge of supposedly competent practitioners, may properly be considered as offering indications for an abdominal delivery. This is particularly the case when the babies have been lost at operation following prolonged unsatisfactory labors, in which the uterus has acted badly and the contractions have been ineffective and irregular, suggesting the early development of a contraction ring. As a general rule, a uterus which has acted poorly in one or more labors will act badly in subsequent labors and the safest course for both patients in cases of this nature is a primary Cesarean section at the time of election, even though no definite pelvic indication can be made out.

Pelvic operations, particularly operations on the uterus, as for instance an attempted suspension which has resulted in a fixation, not infrequently causes serious trouble in subsequent labors and every patient who has had such an operation should be carefully examined during the latter part of pregnancy. If the cervix is found in its normal position and within easy reach there is little chance that the previous operation will cause any marked dystocia, but if the cervix has been drawn up toward the promontory of the sacrum during the development of the uterus and is only to be reached with difficulty, if at all, there is every reason to believe that a pelvic delivery will prove either impossible or extremely difficult, and a primary abdominal delivery can be properly undertaken in the interests of both mother and child. In case the uterine operation has been a myomectomy the possibility of uterine rupture during labor must always be considered, and if the extent of the operation is known an intelligent choice can be made, otherwise the obstetrician must consider the probabilities and act accordingly.

Tumors which obstruct the pelvis may also furnish an indication for abdominal delivery, and the probable necessity for operation should be known before the onset of labor. Cancer of the cervix always causes bleeding during pregnancy, and the cause of bleeding during the latter part of pregnancy should always be carefully investigated and the diagnosis made. If the cancer definitely obstructs the vagina an abdominal delivery is indicated in the interests of both patients. If the cancer is in the early stages and a radical operation is possible an abdominal delivery should be performed as soon as the diagnosis is made, followed by a complete hysterectomy irrespective of the period of pregnancy. If the cancer is inoperable the choice of treatment is open to doubt. If a portion only of the cervix is involved and it is considered that the remainder will dilate properly so that a child can be delivered through the pelvis without subjecting the mother to undue risk from hemorrhage or sloughing a pelvic delivery is allowable, but it must be remembered that in these cases the child is the important patient, since the mother's condition is hopeless, and that if any doubt as to the possibility of a safe delivery through the pelvis exists, an abdominal delivery is indicated for the sake of the child, and to a certain degree for the sake of the mother, on account of the danger of serious bleeding, or of absorption following the sloughing of the cancerous tissue, events which are almost sure to follow the dragging of a child through the diseased cervix, thus tending to shorten the mother's life.

An ovarian tumor blocking the pelvis at the time of labor is a definite indication for an abdominal delivery, but an ovarian tumor of any size should have been discovered and removed during the pregnancy but if it is not discovered until after the patient is in labor it should if possible, be raised out of the pelvis by taxis and the patient allowed to deliver herself. If, however, it is impossible to raise the tumor an abdominal section should be performed and the tumor removed. Operators differ as to the advisability of performing a Cesarean section at this time or allowing a patient to go on in labor and deliver herself, but my own preference is for the performance of Cesarean section, since I believe that the continuance of labor is inadvisable under these conditions.

Fibroid tumors of the uterus may or may not furnish indications for an abdominal delivery. A single fibroid tumor situated in the upper portion of the uterus will seldom cause trouble during labor unless by rendering the uterine contractions irregular and feeble. Multiple fibroid tumors of the fundus of the uterus, if of any size, are almost sure to make labor unsatisfactory, and the safest method of delivery will not infrequently be a Cesarean section followed by an hysterectomy. Fibroids of the lower uterine segment not infrequently block the pelvis and render delivery by the ordinary methods impossible. It must not be forgotten, however, that fibroid tumors usually undergo more or less softening during labor, and sometimes a tumor which seems to offer an insuperable obstacle to delivery will be drawn up out of the pelvis under the influence of the uterine contractions. For this to happen, however, a strong active labor is necessary. It seems fair in these cases to allow the patient to go into labor for a few hours, observing her carefully to ascertain what effect the labor is having on the fibroid. If labor is unsatisfactory an abdominal delivery followed by hysterectomy or a myomectomy should be performed. Any other tumor, whatever its nature or origin, which so blocks the pelvis as to interfere with the passage of the child, furnishes definite indications for abdominal delivery.

Patients with valvular heart disease, particu-

larly mitral stenosis, not infrequently will be more safely delivered by Cesarean section than if allowed to go into labor. This is particularly true of primiparæ, whose soft parts are rigid, since the strain of labor on the seriously diseased heart is apt to be followed by a severe and perhaps fatal collapse, and in a patient in whom labor promises to be fairly difficult this risk should not be run since Cesarean section offers a much safer method of delivery. In multiparæ, in whom the soft parts are relaxed and easily dilatable, abdominal delivery will very seldom be necessary and need not be considered but in primiparæ it should receive careful consideration. Much depends on the way the heart has acted during pregnancy, although my own personal belief is that a labor of even moderate severity, although it may not kill the patient, may leave her a semi-invalid for the rest of her life, and that her interests are often best conserved by an abdominal delivery.

A complete placenta previa close to term with mother and child in good condition will occasionally furnish an indication for an abdominal delivery. If the cervix is long, rigid and not taken up, a condition sometimes seen in primiparæ, or if there is a marked pelvic contraction, abdominal delivery is indicated. If, however, the cervix is soft and easily dilatable, or if the child is markedly premature, pelvic delivery is the best method, particularly if the patient has lost much blood.

Eclampsia is often cited as an indication for an abdominal Cesarean section, but to my mind, except in the presence of a pelvic indication or excessive edema of the vulva, an abdominal delivery is unwise. The results of abdominal Cesarean section for eclampsia have given approximately a 50 per cent. mortality, which is too high to render the operation advisable, since the mortality by other means of delivery varies from 10 to 25 per cent.

Patients who have had one Cesarean section are most safely delivered by Cesarean section in subsequent pregnancies, for although the indication for operation may have been removed at the first operation this is not usually the case, and the uterine scar occasionally ruptures if subjected to the strain of labor.

HYSTERECTOMY FOLLOWING CESAREAN SECTION.

The removal of the uterus following Cesarean section becomes advisable under certain conditions and adds considerably to the risk of operation. It is, therefore, not an operation to be lightly undertaken, and if possible without adding to the risk of the patient, the hysterectomy should be deferred to a subsequent time. In certain conditions, however, it is a necessary operation. If Cesarean section becomes necessary on a patient with a uterus already infected, —because delivery by other means is impossible,—the uterus should always be removed, because the suturing of a septic uterus and its replacement in the abdominal cavity is almost sure to result in a septic peritonitis and death. Under these conditions the mortality of operation will be high, but it will be much lower than if the uterus is closed and replaced in the abdomen. In rare cases uncontrollable hemorrhage following Cesarean section may necessitate an hysterectomy but in most cases it will be possible to control the hemorrhage by other means, such as compression or even ligation of the uterine arteries, and the removal of the uterus will not be necessary. Multiple fibroid tumors of the uterus may necessitate an hysterectomy, although this will seldom be necessary. In most cases the patient's interests will be best conserved if the uterus is sutured and restored to the abdominal cavity, to be removed at a subsequent date after the involution of both the uterus and tumors have taken place, and the risks of operation are materially less than if the operation is performed at the time of the Cesarean section.

PUBIOTOMY.

The status of pubiotomy in obstetrics is as yet undetermined. Comparatively few operators will be found who, at the present time, prefer to perform a pubiotomy as a primary operation on an uninfected case in preference to a Cesarean section. Some operators go so far as to decline a pubiotomy in any case, preferring even a craniotomy on a living child to the risks attendant on pubiotomy. Pubiotomy, although a great improvement over the older operation of symphysiotomy is not an operation without risk, and at least one patient has died of hemorrhage at operation, while a considerable number have been more or less seriously invalided. Serious infection of the pelvis originating in the pubiotomy wound has occurred in some cases. Extensive injury of the bladder and non-union of the pelvic girdle have also been seen. On the other hand, in the hands of its advocates the results of pubiotomy seem to be satisfactory at the present time. It is certainly a safer operation from the standpoint of the maternal life than a Cesarean section when the conditions laid down in the early part of this paper cannot be fulfilled, particularly when a suspicion of sepsis is present or the patient has been in labor for a long time. Its field of usefulness is, however, a somewhat narrow one, for it cannot be properly undertaken when the true conjugate diameter is less than 7½ cm. and the child is of average size, because the spreading of the pelvis to a degree sufficient to allow the fetal head to pass in markedly contracted pelves may result in permanent disability of the patient, owing to injury to the sacro-iliac joints. It is certainly, therefore, not a substitute for Cesarean section when the absolute indication is present.

I believe that it has a legitimate place in obstetrics, and I should define the indications for its performance as follows: When a patient has been in labor for some time with a pelvic contraction of not less than 7½ cm. and the child

is alive and vigorous, pubiotomy is unquestionably the safest operation at our command for both mother and child, although rather more dangerous to the mother alone than a craniotomy. The risk to the maternal life is less than if a Cesarean has been performed under similar conditions and the child is given a chance for its life, the only alternative operations being Cesarean section on the one hand and craniotomy on the living child on the other. Certain operators prefer Cesarean section followed by removal of the uterus, feeling that pubiotomy has no place in obstetrics, but I believe that under the conditions defined pubiotomy is a legitimate operation, and in the majority of cases the end results will be satisfactory, although as a primary operation at the time of election it is my belief that as compared with it Cesarean section has every advantage and no disadvantages.